

H-60 Performance-Based Logistics (PBL) Initiatives



H-60 Seahawk Defenders of the Force



Status Overview Presented to:

Leadership Team

LCDR M. A. Parker
Deputy Reserve Liaison -
Helio

Commander Naval Air Reserve
Det Patuxent River

Deputy APML
PBL Initiatives
Depot / Industrial Ops



Agenda



USN H-60 PBL Contract overview

Vibration Damper . **AWARDED DVD**

Avionics **AWARDED PBL**

Dynamic Component **AWARDED PBL**

FLIR **AWARDED PBL**

Tip to Tail **AWARDED PBL**

Road Ahead

Other projects

Summary

POP
Concluded

**Total H-60
PBL/DVDs
5 Awarded**

Vibration Damper

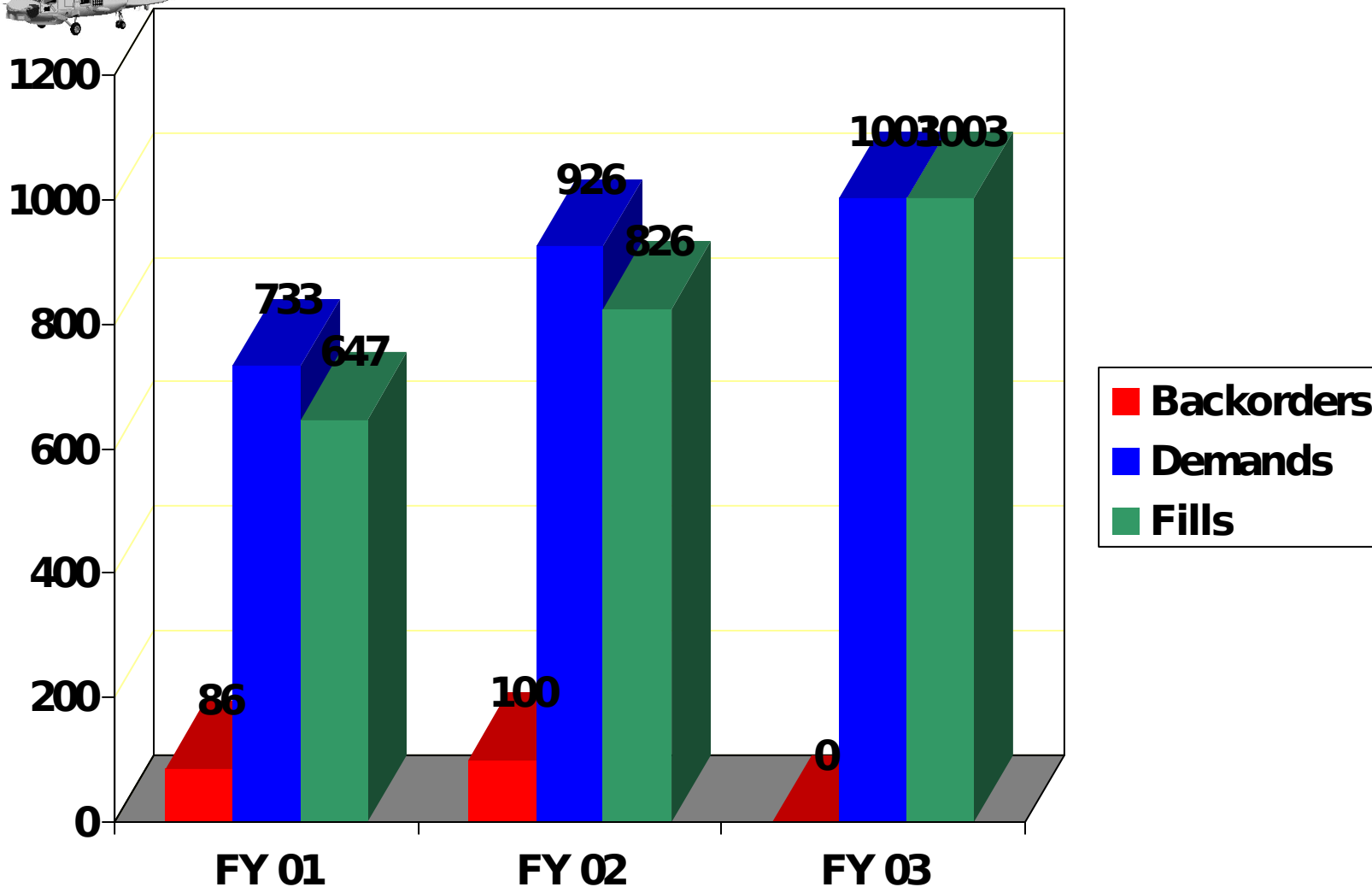


- CONTRACT AWARDED. March 1999. Contract with Sikorsky \$3.8M annually. Ended 30 Sep 03; item under BOA until T2T
- Firm Fixed Price – Anticipated demand of 43 each month with contract ceiling of 60. During periods of surging requisitions, SAC provided its contractual requirement of 60; delta covered by additional orders against another long-term contract
- Contractor met availability measurements despite *increase in demands* Metrics in work
- Equally valuable benefit are the lessons learned by the contractor as well as the government in the area of PBLs

**AWARDED DVD
POP completed**



Vibration Damper



Avionics



- CONTRACT AWARDED. 10May 2002.
- Firm Fixed Price Requirements contract
- Lockheed Martin Sys Integration: \$5.72M .
- POP: Five-month base ordering period & three one-year option periods; set to end Oct 05
- System(s): SH-60B ASW Suite: 7 WRAs and associated SRAs (42 NIINs)
- Availability/Fill-rate metric; contractor eligible for incentive bonus; amount is a percentage of the billed cost during that performance period for bonus
- Comments: Backorders reduced from 10 to 1 (carcass constrained item)

**Awarded
10 May 2002**

**Folds into T2T
Phase I**

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review: - 2nd Otr FY 04

AWARDED





Avionics Fill Rate Performance

Apr – Sep 03

Fleet Perspective

$$= \frac{\text{On-time Fills}}{\text{Total reqs}} = \frac{83}{95} = 87.4\%$$

Contract Metric

$$= \frac{\text{On-time Fills - subsequent misses}}{\text{Total reqs - initial misses (govt)}} = \frac{83-1}{95-12} = 98.8\%$$

Incentive is this percent of contracted value for this performance period

Bonus
Avail this perf period
Incentive (1 Apr - 30 Sep 03)

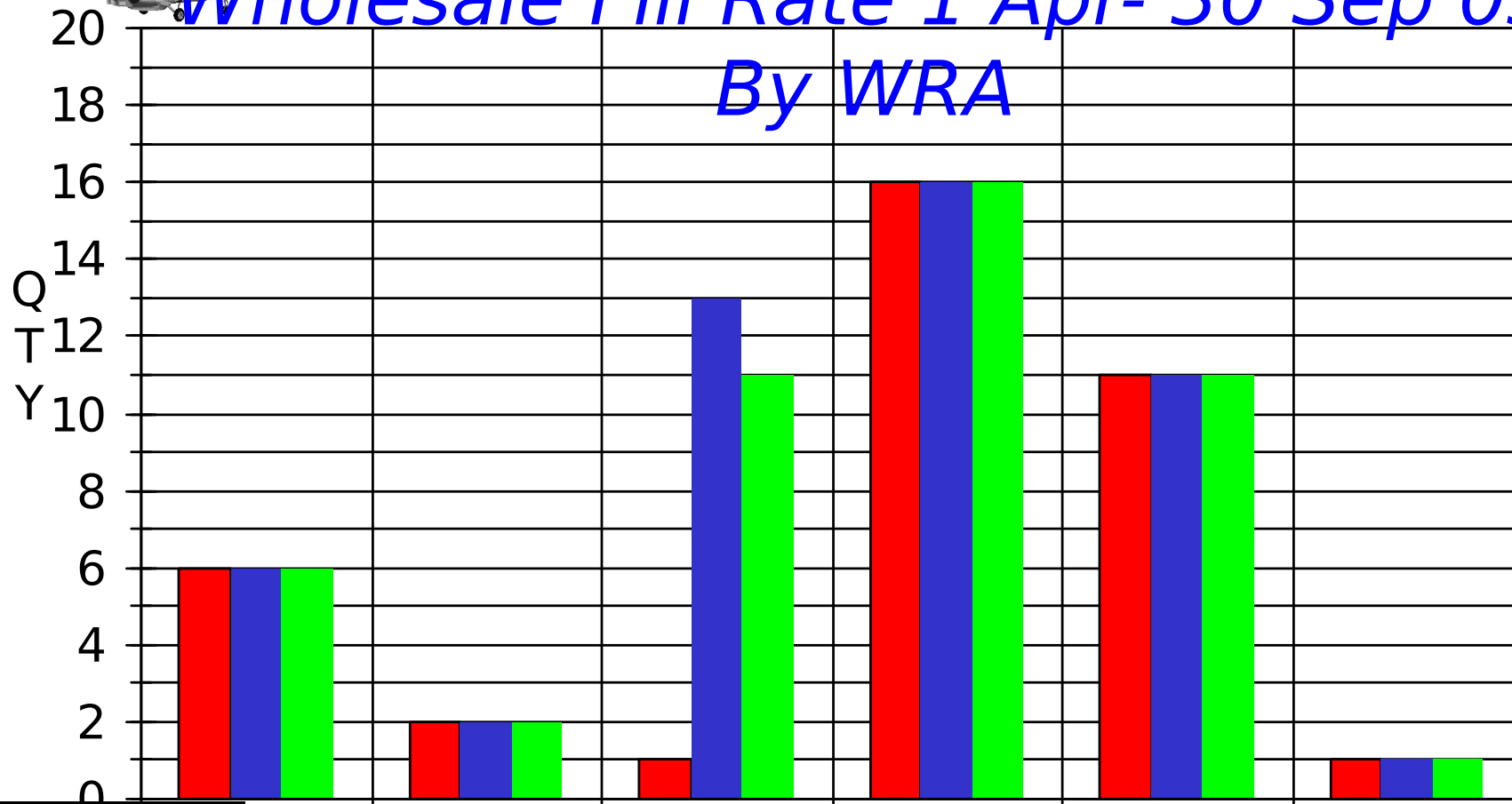
Fill Rate	Incentive	Bonus
100%	5%	\$44,745
95-99%	4%	\$35,796
90-94%	3%	\$26,847
85-89%	2%	\$17,898
80-84%	1%	\$ 8,949

Received Bonus



Avionics

Wholesale Fill Rate 1 Apr- 30 Sep 03 By WRA



9 Spares
coming Dec
'03

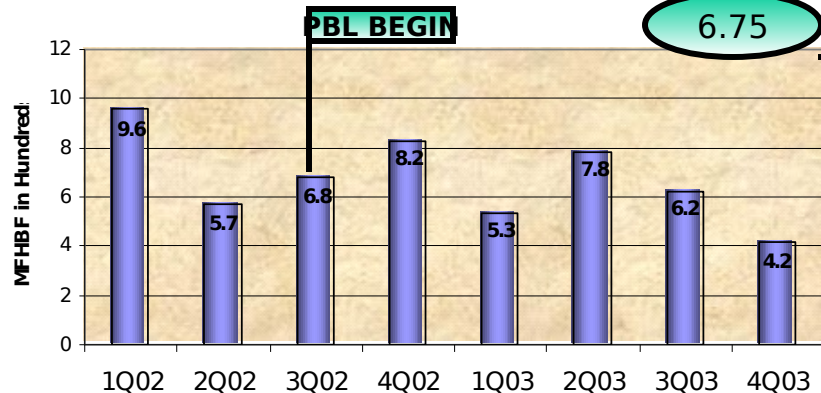
■ On Time Fills ■ Total Reqs ■ Total Fills



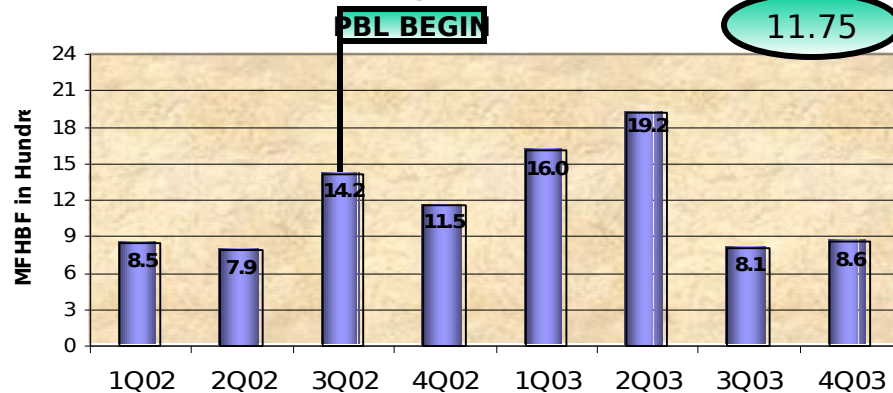
Avionics MTBF



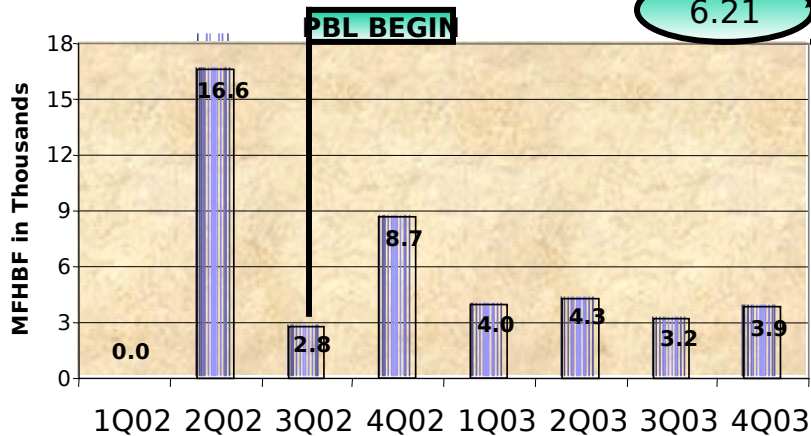
Converter Display (NIIN 01-246-0704)



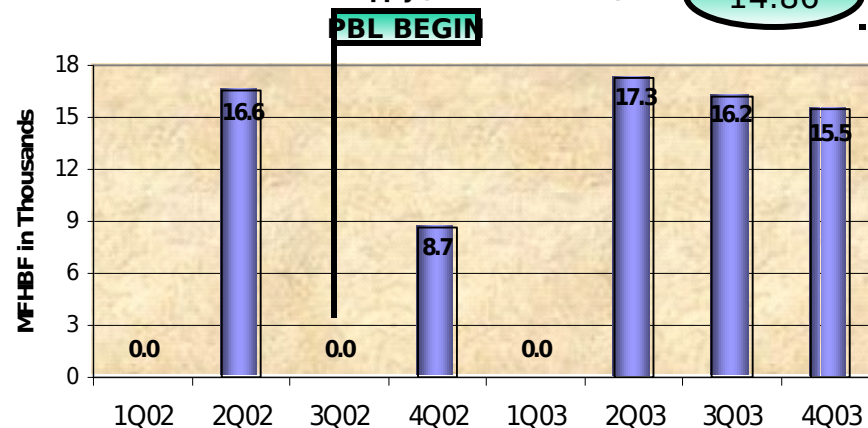
Converter-Multiplex (NIIN 01-283-3772)



Armament Controller R/T (NIIN 01-460-7927)



Power Supply (NIIN 01-460-7947)

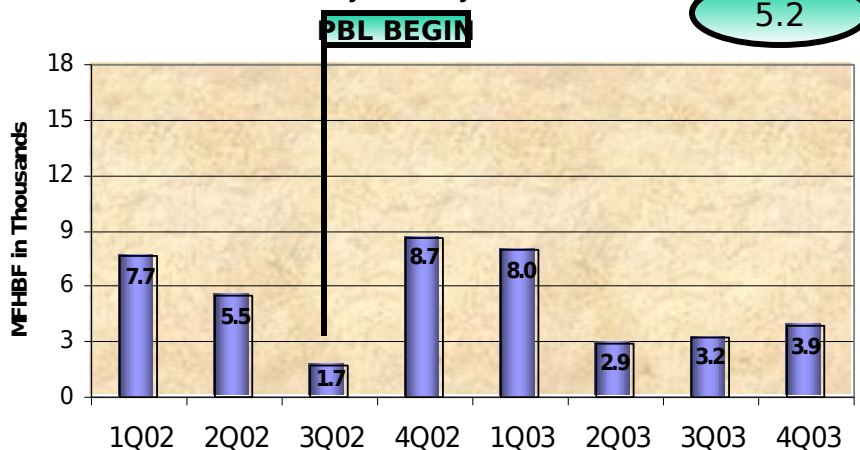




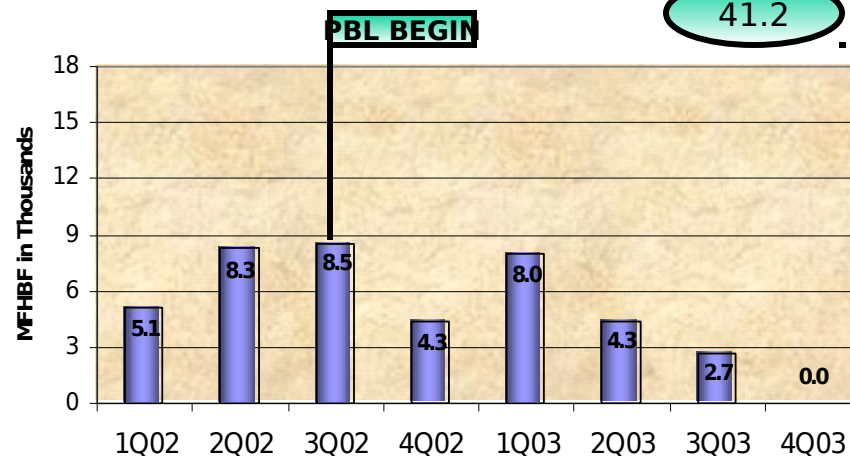
Avionics MTBF



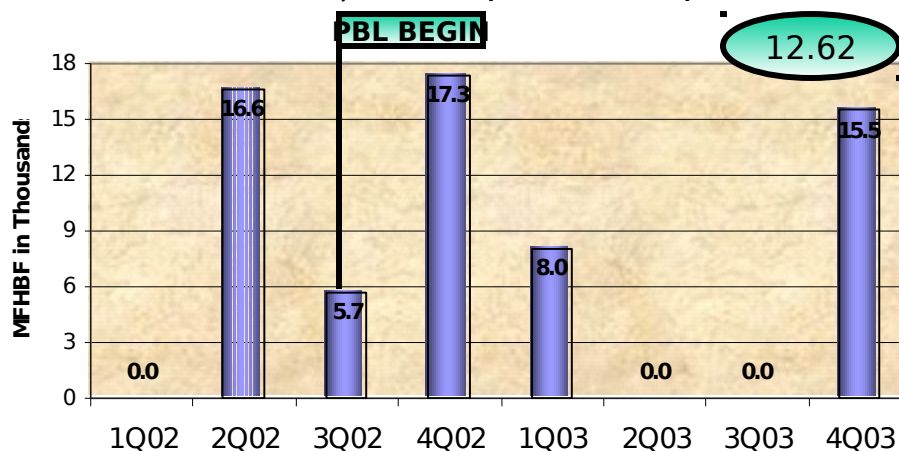
Armament Relay Assembly (NIIN 01-351-4885)



Control Monitor (NIIN 01-174-6954)



Processor, Radar Data (NIIN 01-380-0244)





Dynamic Components



- CONTRACT AWARDED. 27 Feb 2003.
- Firm Fixed Price IDIQ contract
- Sikorsky Aircraft Corporation : ~\$109M (available bonus: ~\$5M)
- POP: 1 Mar 03 – 30 Sep 05:
- System(s): 14 NIINs; retention bearing, gearboxes, servos, drive shafts
- Performance metric: Availability (fill rate metric); Output (KTR production numbers) 7 parts are availability metric; 7 are output)

**Awarded
27 Feb 2003**

**Folds into T2T
Phase I**

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AWARDED





Dynamic Components

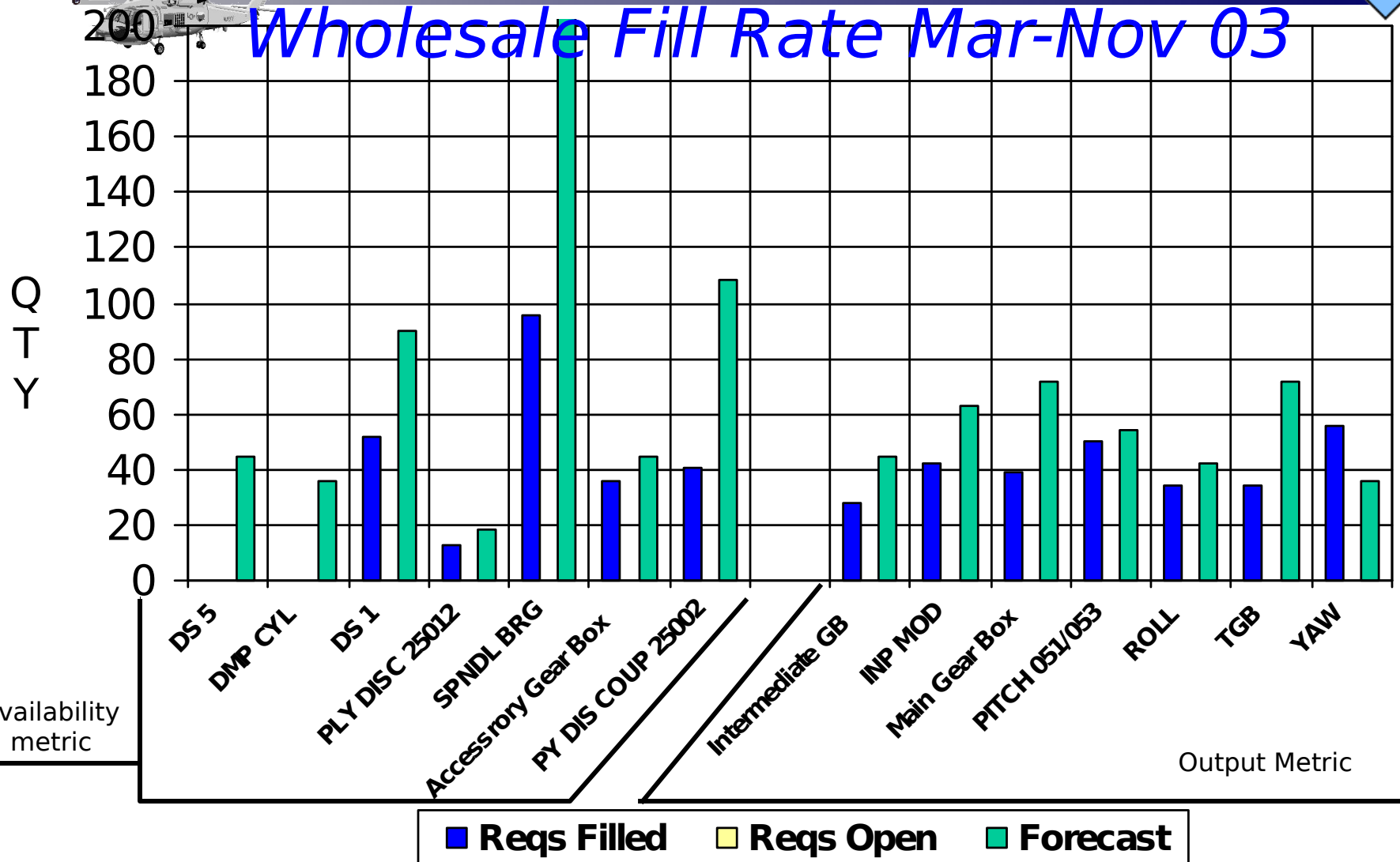


- Comments: Open req's fell from 76 in Apr to 0 on 10 Dec; Govt placed no requisitions for two output-metric items, fewer than the minimum number of repairs were performed; consequently SACs output bonus was reduced to 60% as only 12 of 14 items achieved required fill rate metric
- Look Ahead: SAC is looking to:
 - Continue to manage open reqs at zero
 - Continue SAC/Fleet coordination
 - Exploring 11 product improvements and 11 logistics improvements; determine root causes/corrective actions for component issues
- Next progress review: – 2nd Qtr FY 04



Dynamic Components

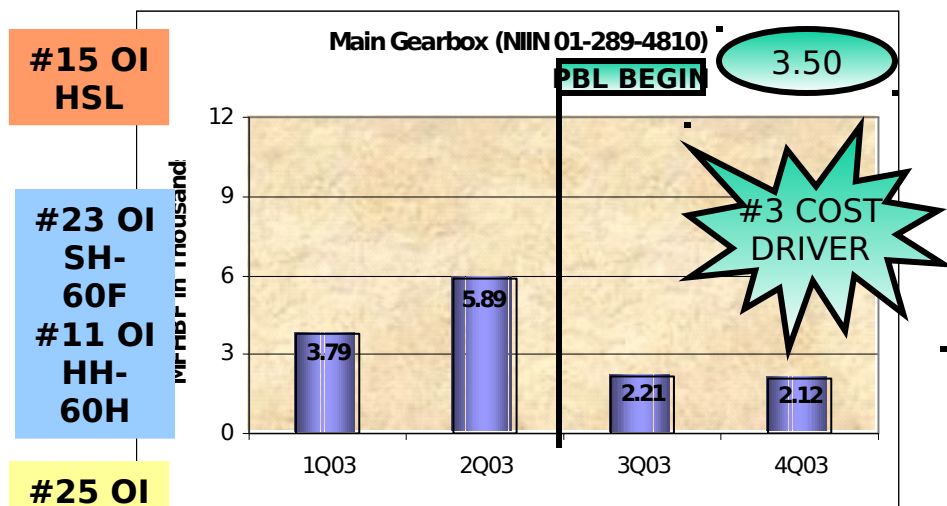
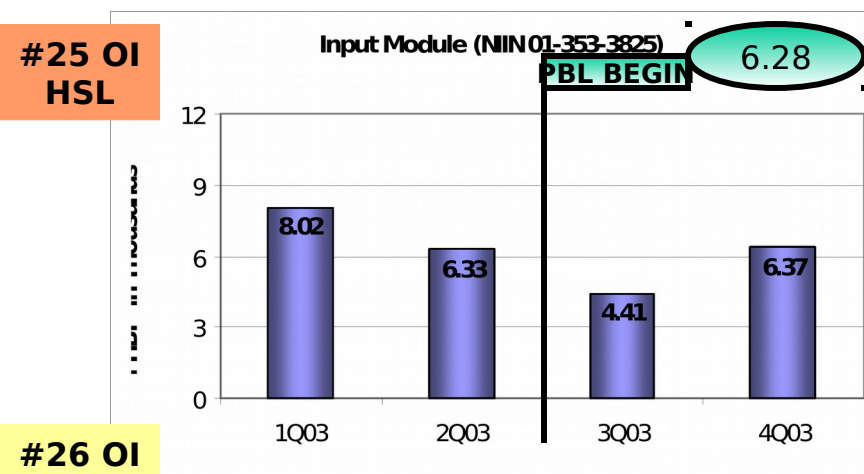
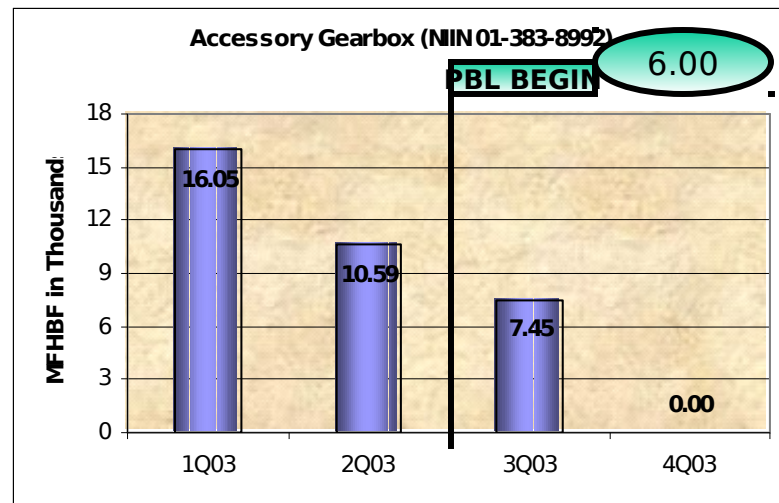
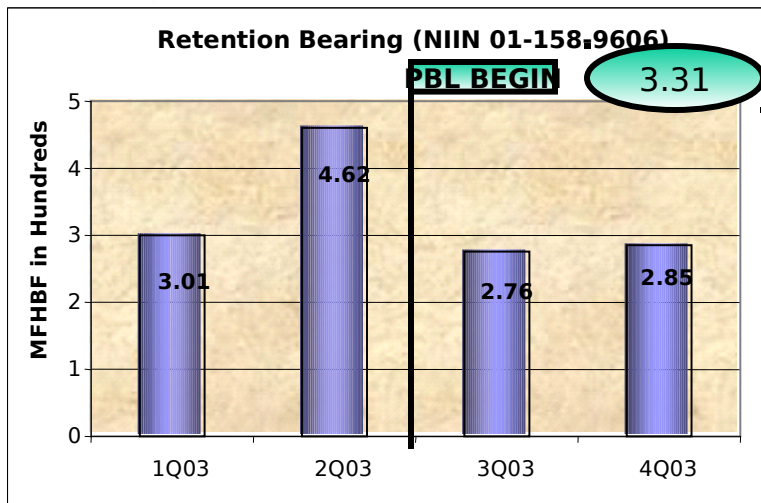
Wholesale Fill Rate Mar-Nov 03





Dynamic Components

MTBF



Four Qtr Avg

Data Source: DA

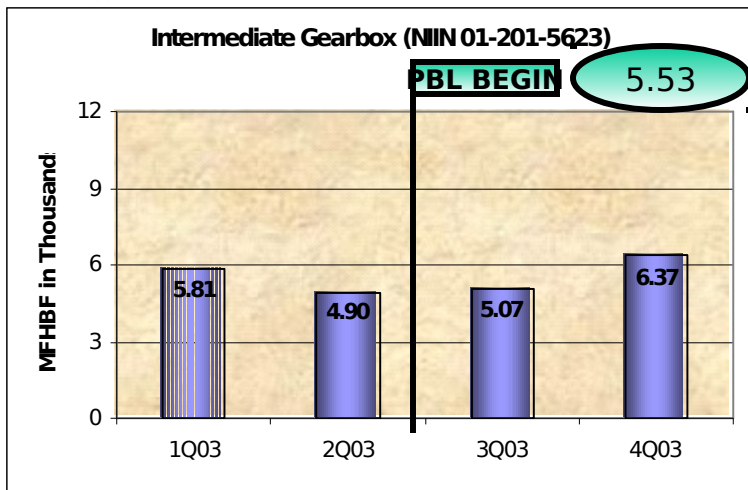
Data Timeframe: Oct02-Sep03



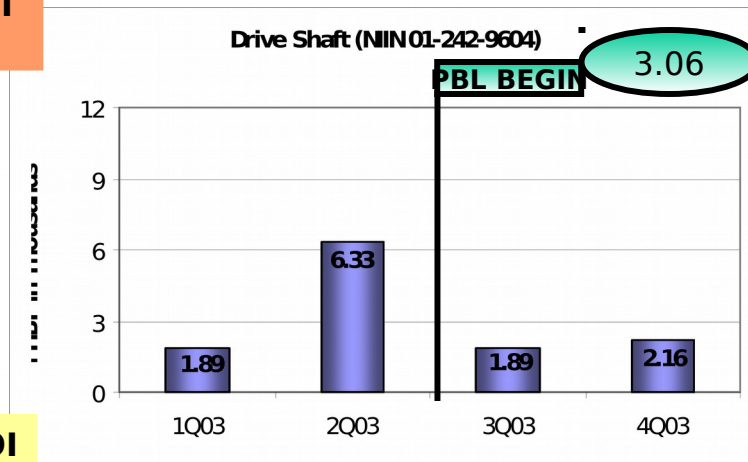
Dynamic Components

MTRF

#8 OI
HSL

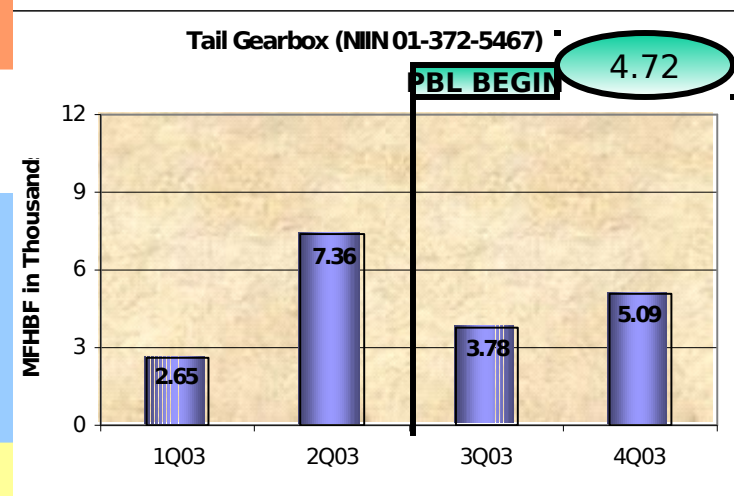


Drive Shaft (NIN 01-242-9604)



#11 OI
HC

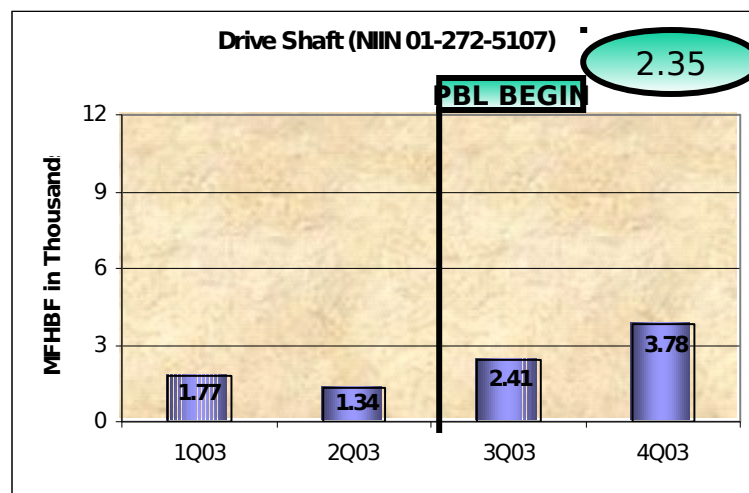
#11 OI
HSL



#23 OI
SH-60F
#11 OI
HH-60H

HC

Drive Shaft (NIN 01-272-5107)



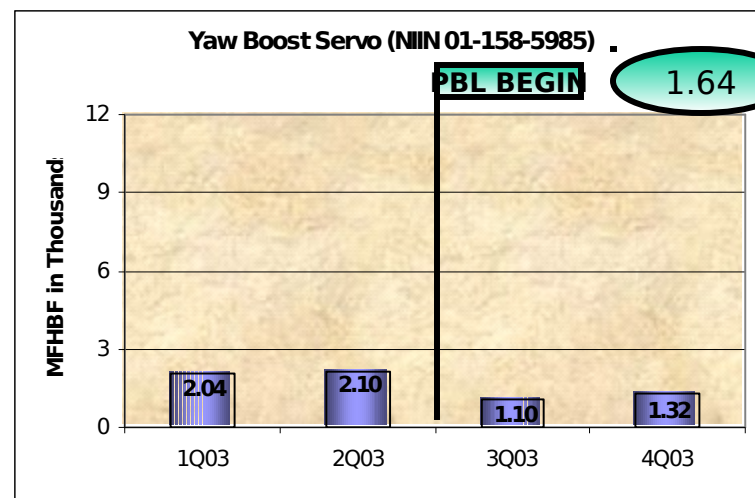
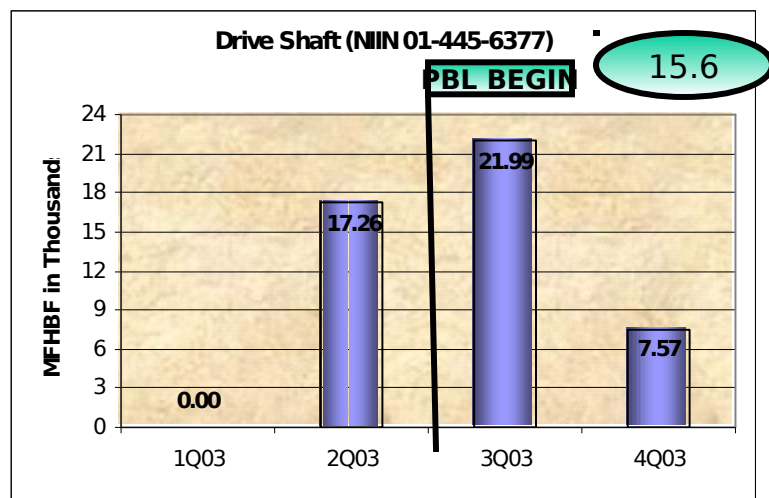
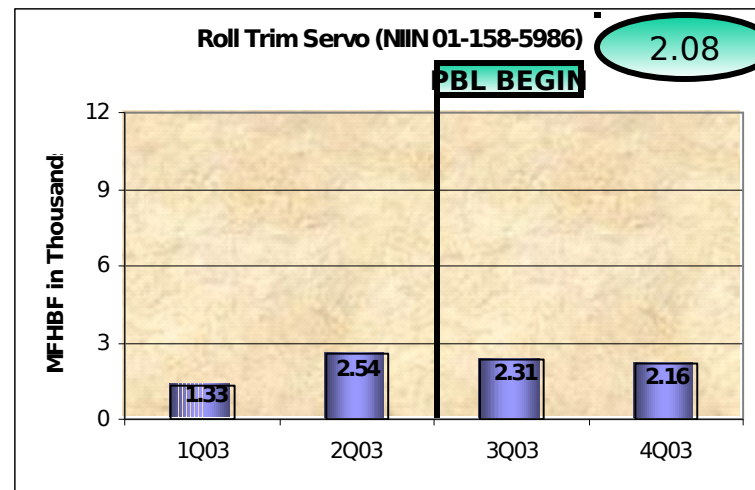
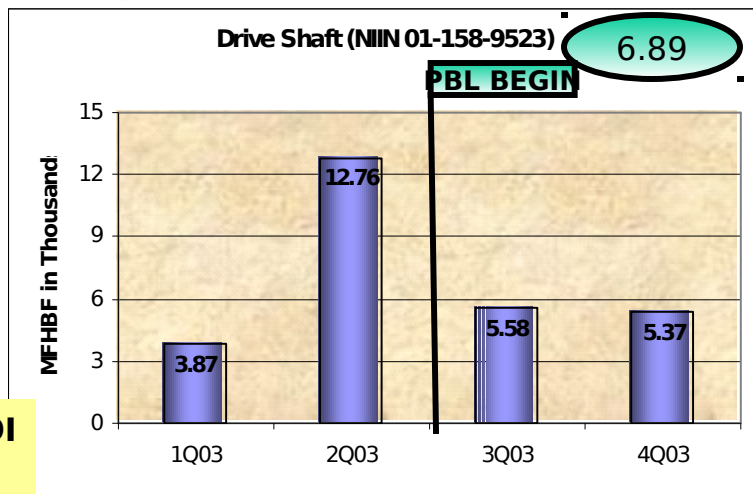


Dynamic Components

MTBF



#29 OI
HC



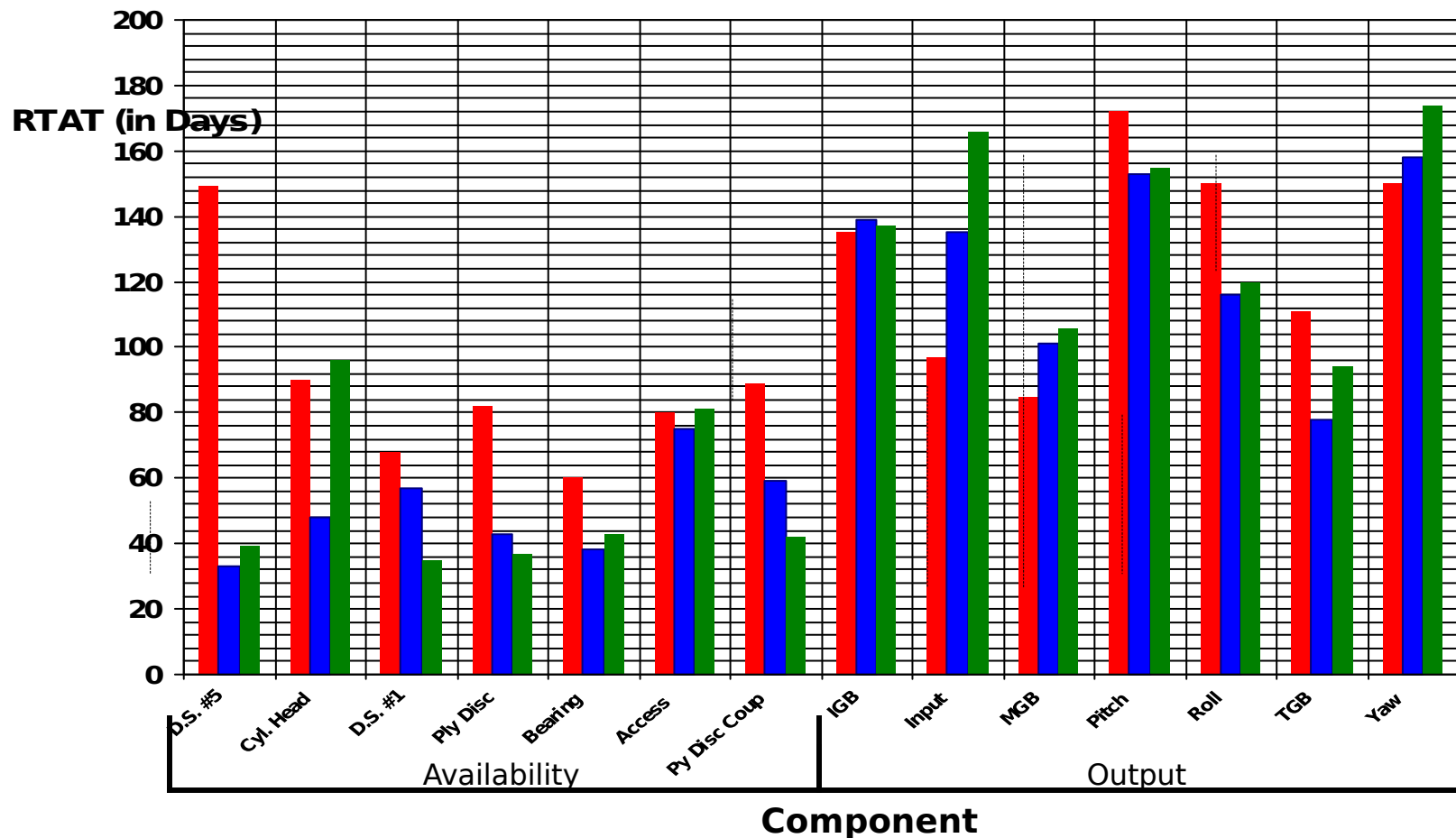


Dynamic Components

RTAT



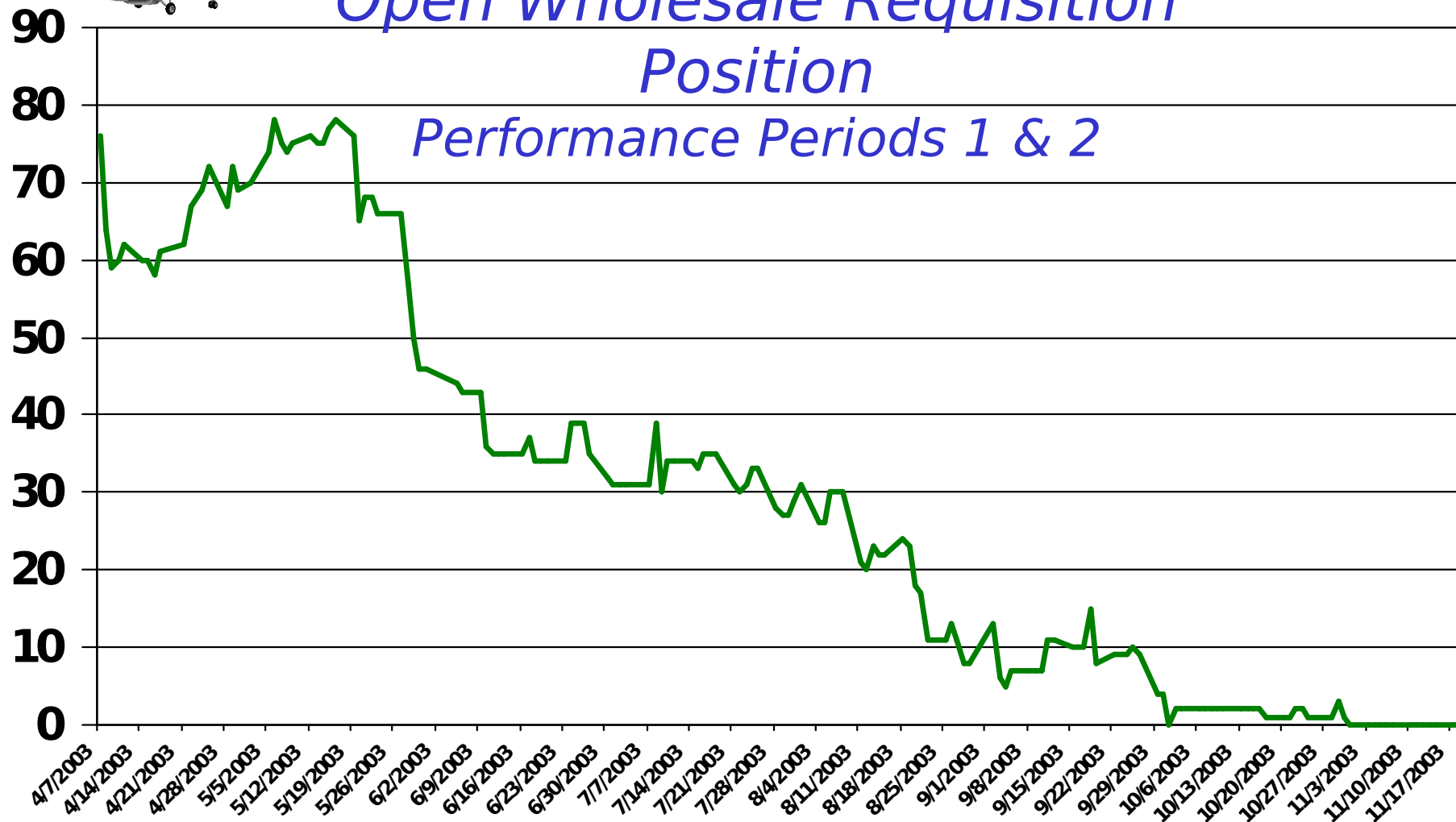
Baseline & Performance Periods I & II





Dynamic Components *Open Wholesale Requisition Position*

Performance Periods 1 & 2





Forward-Looking InfraRed (FLIR)



- CONTRACT AWARDED. 30 Sep 2003.
- Firm Fixed Price Requirements contract
- Raytheon (McKinney TX); touch labor at NADEP Jacksonville
- POP: 5 Base years (\$70.9M); 5 years' of options (\$52.3) (Oct 03-Sep13)
- System(s): Turret, Electronic Unit, Hand Control Unit
- Metric: Improvements to MTBF (Reliability) & Availability (fill rate metric)
- Look Ahead: MH-60S APML to explore adding -44A

**Awarded
29 Sep 2003**

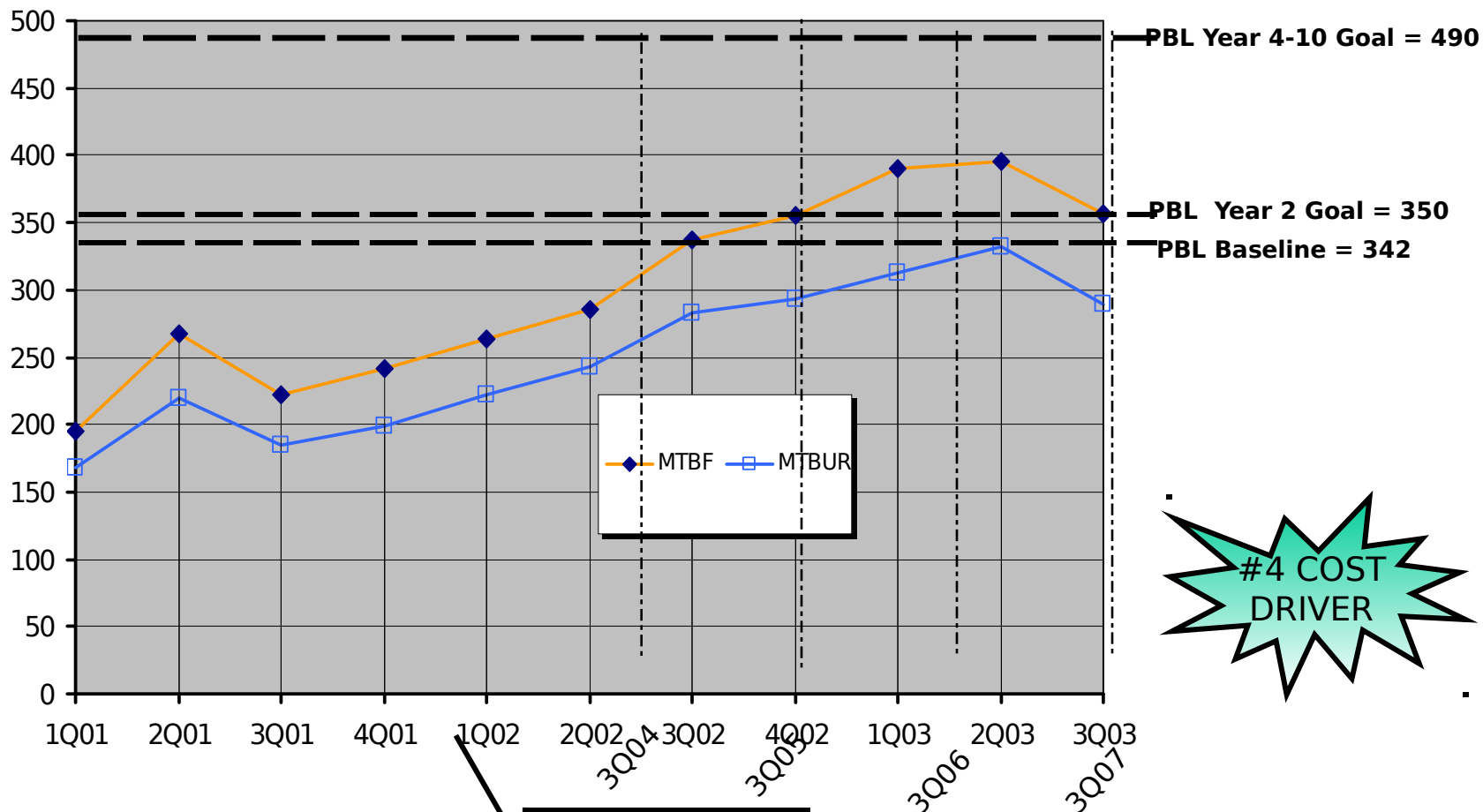
Raytheon



Turret Unit (WRA-1) Reliability



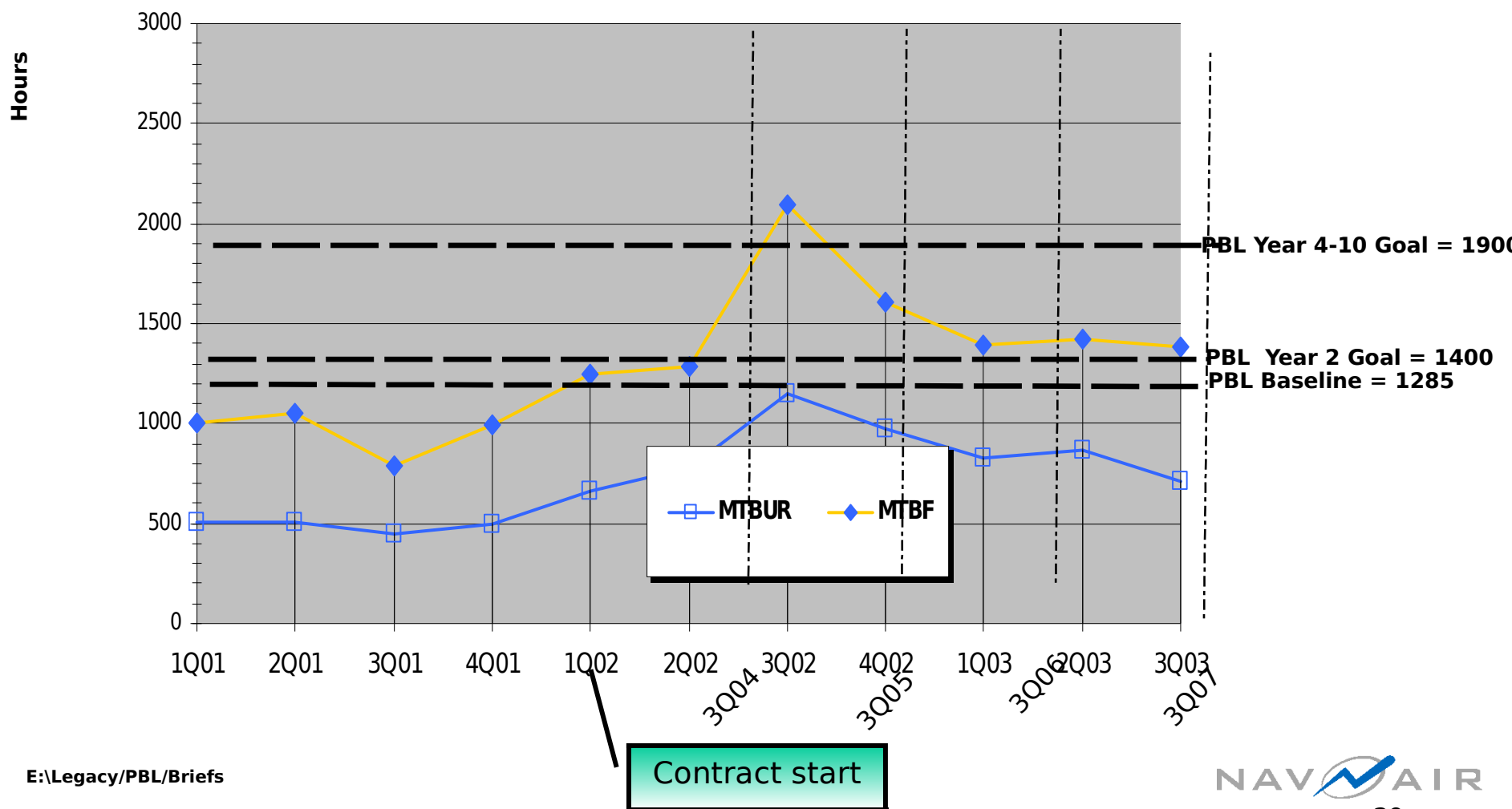
2dQtr FY-01 through 4thQtrFY03
12 Month Rolling Averages and PBL MTBF Requirements





Electronic Unit (WRA-2) Reliability

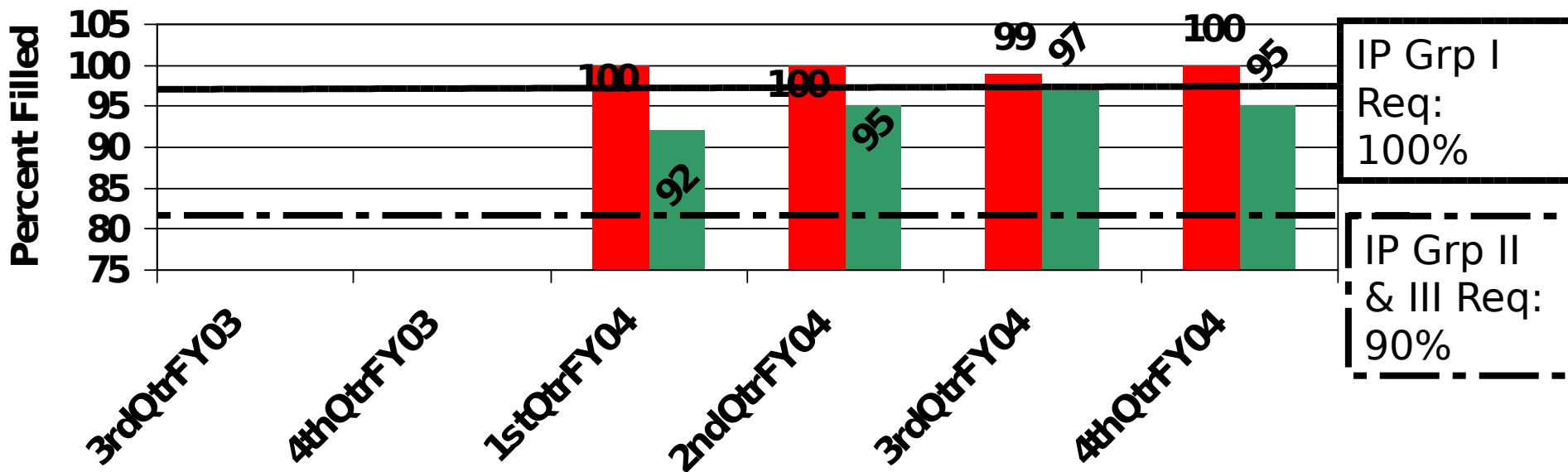
2dQtr FY-01 through 4thQtrFY03
12 Month Rolling Averages and PBL MTBF Requirements





FLIR - Percentage of Requisitions Filled within Required Time Frame

■ Issue Pri Grp I ■ Issue Pri Group II & III



Sample

Tip to Tail (T2T)



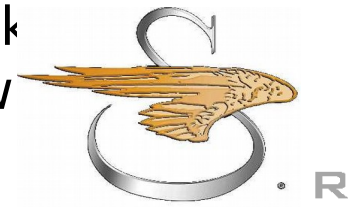
- CONTRACT AWARDED. 30 Dec 2003.
- Firm Fixed Price Incentive Requirements contract
- Maritime Helicopter Support Company (MHSCo), a Sikorsky – Lockheed Martin joint venture; will make use of five organic depots
- POP: 5 years (\$417M Phase I); (Jan04-Dec08)
- Large program; NIINS handled through two-phase approach:
Phase I - 540 NIINS (award Dec 03) Phase II - 791 NIINS
(~ Jul 04)



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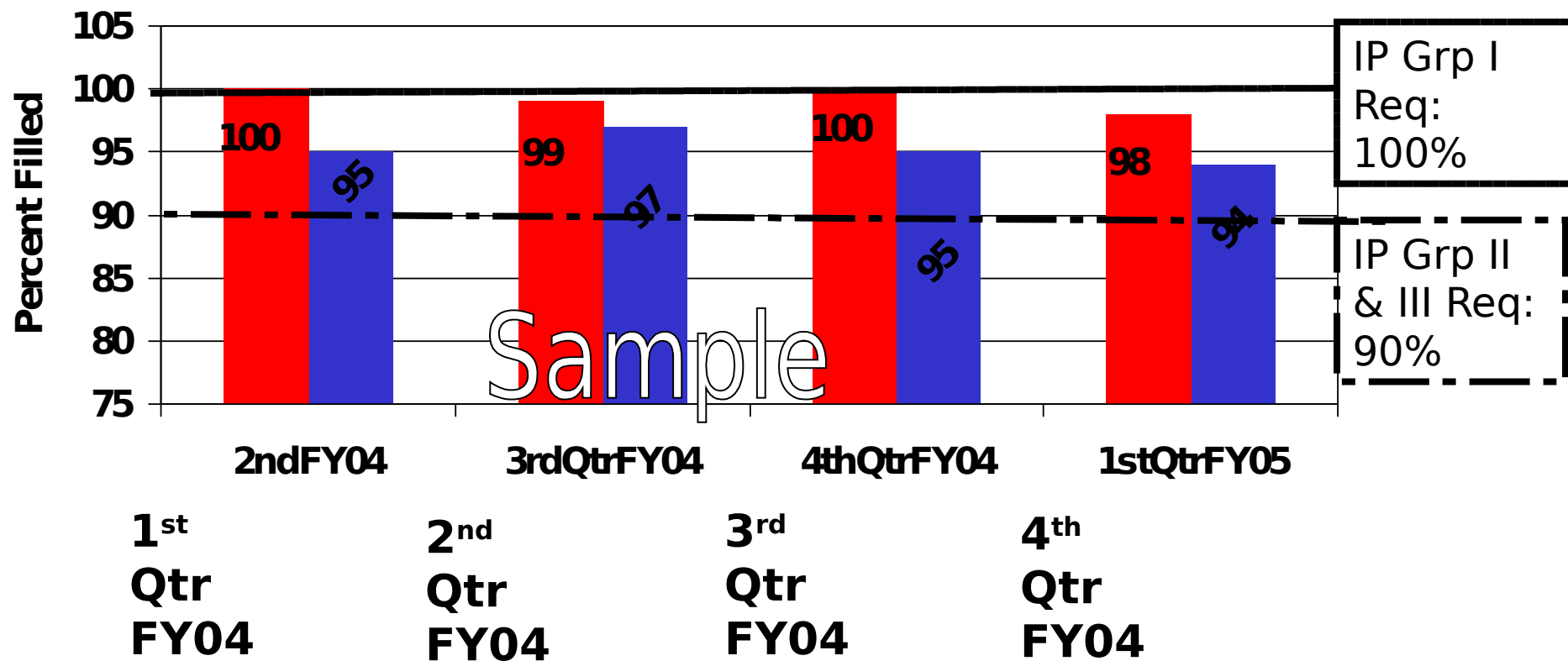


AWARDED



T2T - Percentage of Requisitions Filled within Required Time Frame

■ Issue Pri Grp I ■ Issue Pri Group II & III





Leadership Meeting Q & A



What are the reliability/availability numbers.

Discussed on earlier slide

Are we paying for individual repairs?

No; the point is that all requirements of a period are covered. The contract is for all demands for the performance period; over-and above after 120-125% flight hour increase

What is the process for adding new R/S NIINs to the Tip-to-Tail PBL, or will they constitute a new PBL effort?

- * Examining 'Sierra', Romeo system treatments; investigating Air 6.0 direction to stand-up organic depot capability for peculiar 'S' & 'R' equipment;
- * Legacy items that have 'S' & 'R' use are in T2T



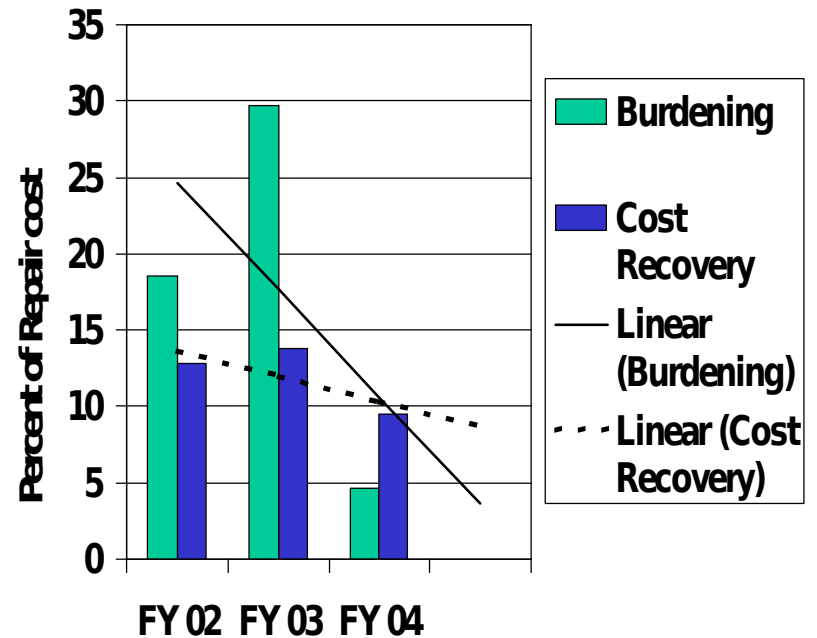
Leadership Meeting Q & A

continued



What is the commitment by ICP to reduce the surcharge, by how much and when?

Cost Recovery Rate & Burdening are commonly referred to as surcharge, a cost-of-doing business fee added to the repair price for components.. Computed annually, NAVICP strives to reduce to it to the lowest level or tier for PBL items and has done so thus far. Historical and current figures:



Road Ahead



- *Continue on with T2T Phase II NIINs
- *Considering adding AAS-42A FLIR to existing contract
- *Explore supporting Common Cockpit with a PBL contract
- *Explore MH-60R PBL support
- *Continue oversight tools of contracts' progress

BACKUP SLIDES

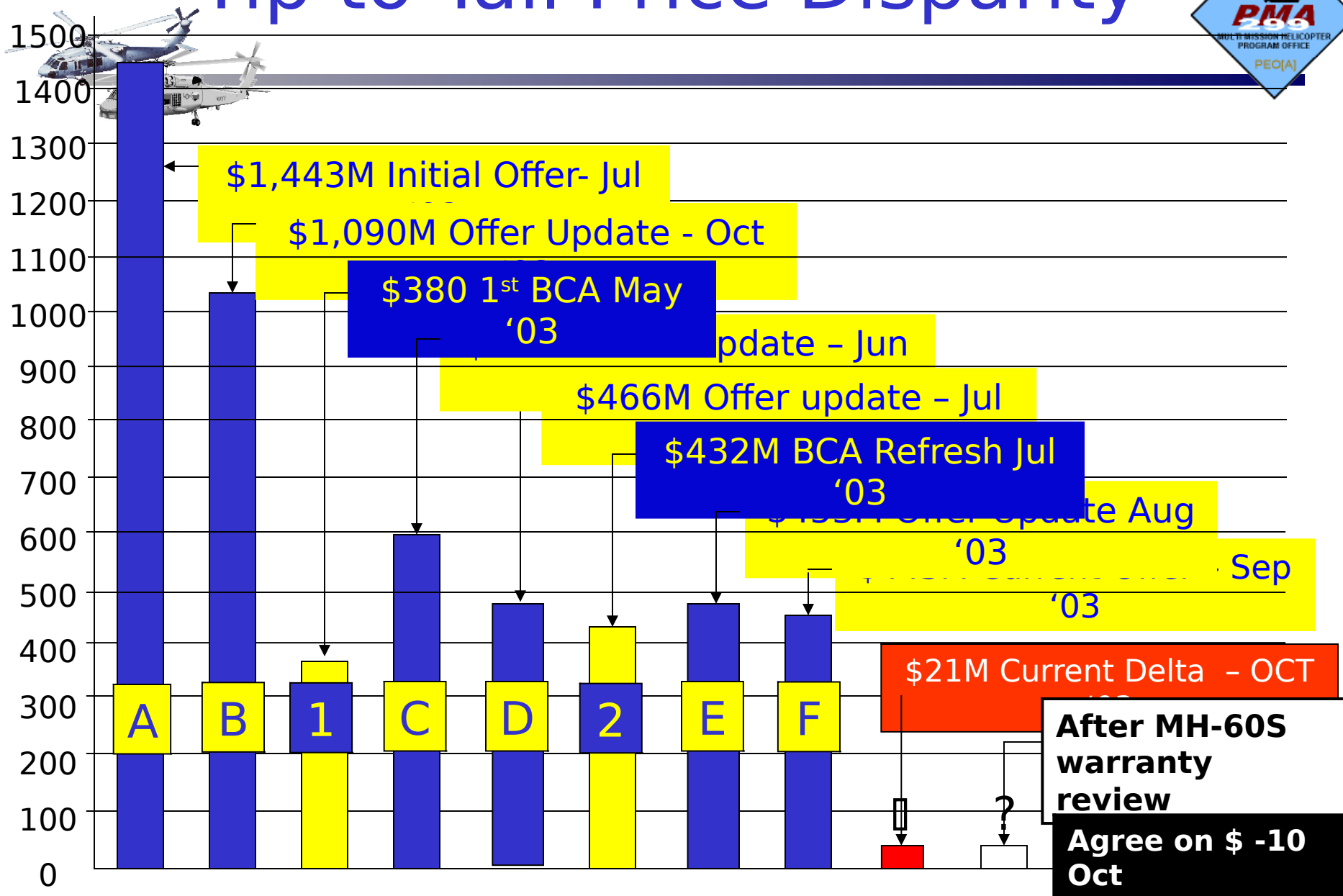


Metric Comparisons



TITLE	CONTRACTOR	# NIINS	AVAILABILITY MEASURE			PARTNER DEPOT	METRIC
			GRP I	GRP II	GRP III		
DYN COMP	SAC	14	48 hrs (96 MGB)	144 hrs	192 hrs	N/A	FILL RATE
AVIONICS	LMSI	42	24 hrs	72 hrs	192 hrs	N/A	FILL RATE
TIP TO TAIL	MHSCO	540 791	24 Hrs FOB Origin	72 hrs FOB Origin		VARIOUS	Failures/100K flt hrs
FLIR	RAYTHEON	3	24 hrs (100% avail)	14 days hrs (90% avail)		JAX	MTBtwn Failures MTBwn Unsked Removals

Tip to Tail Price Disparity



Summary



A PBL approach must be considered nowadays – it can be a “Win-Win” situation, but to achieve the most, it requires:

- a unique level of support and teamwork from all concerned
- components/items that lend themselves to improvement
- a contractor who is ready, willing and able to effect those improvements; better parts stay on wing longer and repaired less leading to a profit opportunity for the contractor.
- Title 10 issue - PBLs cannot deviate from Title 10 requirements (organic depot considerations)

TAKEAWAY: Cost – Obsolescence – Reliability – Availability. A good PBL contract makes the most of these areas through successful public/private teaming effort allowing for war readiness enhancements. Achieving this ambitious goal requires

**COR
A**

equally innovative contract preparation and extensive



Dynamic Components



- 21 Engineering Improvements Identified
 - Add MGB Lube Pump to Product Improvement Matrix
 - Collecting Scrapped Chip Detectors and Flex Packs
 - Completed Eng Report on Boost Servo Hyd Leak
- 20 Logistic Improvements Identified
 - Forwarded Improved DS Wrench to NAWC for Review
 - Preparing Cost Benefit Analysis Report
 - Reviewing “No Damage Allowed” Entries in Pubs
 - Reviewing SM&R Code Change to Servos
 - Using “Brio” to develop RTAT Analysis
 - Developing Reqs vs Carcass Returns Metric
 - Reviewing Pubs to Incorporate Drive Shaft Bench Test





Dynamic Components



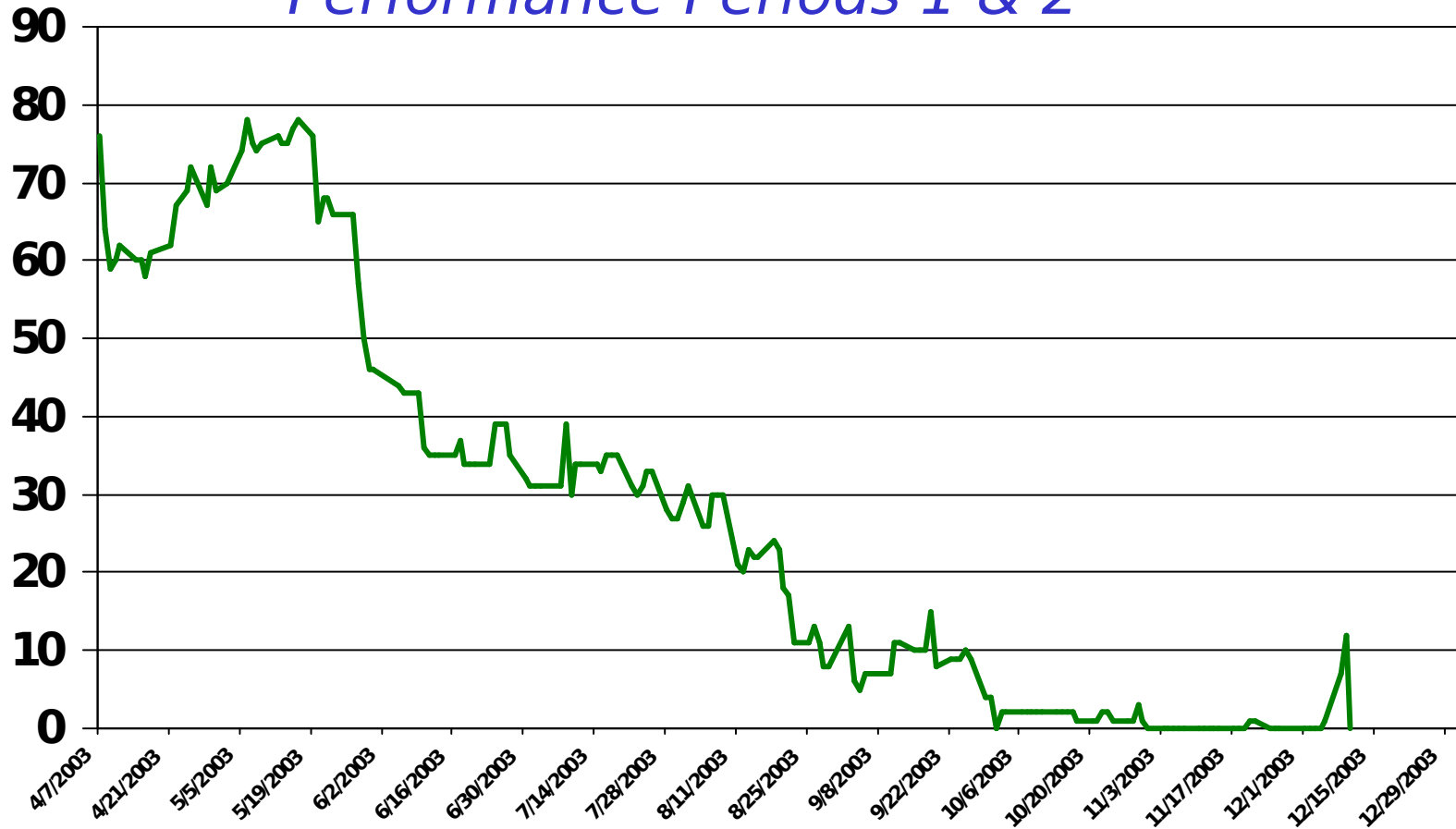
Description	Current Month Demand			Current Month Reqs Filled		RFI	Current Month Open Reqs		Reqs		Filled Reqs		Open Reqs	
	Forecast	Actual	Group 1	Actual	Group 1	On Hand	Actual	Group 1	Total YTD	Group 1 YTD	YTD	Group 1 YTD	YTD	Group 1 YTD
DS5	3	0	0	0	0	80	0	0	0	0	0	0	0	0
DMP CYL	2	0	0	0	0	28	0	0	1	0	1	0	0	0
DS1	12	2	0	2	0	115	0	0	55	2	55	2	0	0
PLY DISC	2	0	0	0	0	33	0	0	14	6	14	6	0	0
SPNDL BRG	25	7	3	7	3	172	0	0	107	17	107	17	0	0
AGB	4	0	0	0	0	14	0	0	37	16	36	16	1	0
PY DIS COUP	10	2	0	2	0	88	0	0	44	6	44	6	0	0
IGB	4	2	1	2	1	14	0	0	31	17	31	17	0	0
INP MOD	5	0	0	0	0	9	0	0	42	19	42	19	0	0
MGB	7	1	0	1	0	6	0	0	42	24	42	24	0	0
PITCH 051/053	7	0	0	0	0	20	0	0	50	8	50	8	0	0
ROLL	5	2	0	2	0	25	0	0	38	12	38	12	0	0
TGB	7	0	0	0	0	35	0	0	34	5	34	5	0	0
YAW	7	1	0	1	0	8	0	0	58	17	58	17	0	0
TOTAL	100	17	4	17	4	647	0	0	553	149	552	149	1	0



Dynamic Components



Open Requisition Position Performance Periods 1 & 2





Sikorsky Turn-around Improvements



Part	2001 RTAT In days	2002 RTAT In days	% Improvem ent (decline)	Improvement Initiatives
Accessory Gearbox	74	68	8%	• Process flow revision – reduced queue time • LECP for Sermatel/Rockhard – reduced corrosion
Cylinder End Assembly	72	67	7%	• Created rotatable pool of parts
Intermediate Gearbox	31	69	(122)%	• Expedited input flange material from M • Recovery in 20





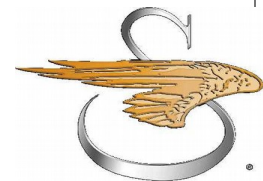
Sikorsky Turn-around Improvements



Part	2001 RTAT In days	2002 RTAT In days	% Improvement (decline)	Improvement Initiatives
Main Gearbox	64	46	28%	• Process flow revision – reduced queue time • LECP for Sermatel/Rockhard – reduced corrosion
Yaw Boost Servo	180	140	22%	• Management improvement of supplier turn time • Procured new servo test stand • In-house testing capability established
Elastomeric Bearing	76	50	35%	• Created rotatable pool of parts • I-Level organic repair O.Ked • Implemented improved O-lvl Maint inspection procedures



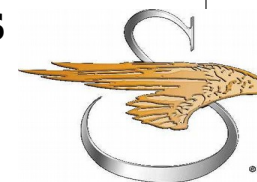
Sikorsky Turn-around Improvements



Part	2001 RTAT In days	2002 RTAT In days	% Improvem ent (decline)	Improvement Initiatives
Tail Gearbox	106	83	22%	• Process flow revision – reduced queue time • LECP for Sermatel/Rockhard – reduced corrosion
Tail Rotor Drive Shaft #1	137	60	56%	• New shot peen offload vendor established • Implemented new corrosion protection coatings • Added drain holes preventing water entrapment • Enhanced maintenance procedures for protection and treatment



Sikorsky Turn-around Improvements



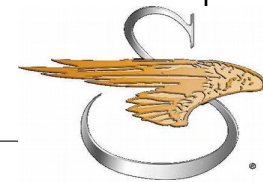
Part	2001 RTAT In days	2002 RTAT In days	% Improvement (decline)	Improvement Initiatives
Input Gearbox	94	77	19%	• Process flow revision – reduced queue time • Developed and implemented new procedures and GSE tooling – new maintenance task to R&R input seals
Tail Rotor Disconnect Coupling Shaft	82	79	4%	• New shot peen offload vendor established • Developed & Implemented new I-Level procedures – R&R of bushing • Proposed new coatings – corrosion protection



Sikorsky Turn-around Improvements



Part	2001 RTAT In days	2002 RTAT In days	% Improvem ent(declin e)	Improvement Initiatives
Roll Trim Servo	148	184	(24)%	• Procured new servo test stand • Developed in-house test capability • Output significantly up in 4Q02 • Recovery in 2003



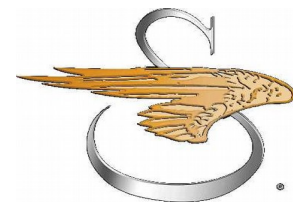
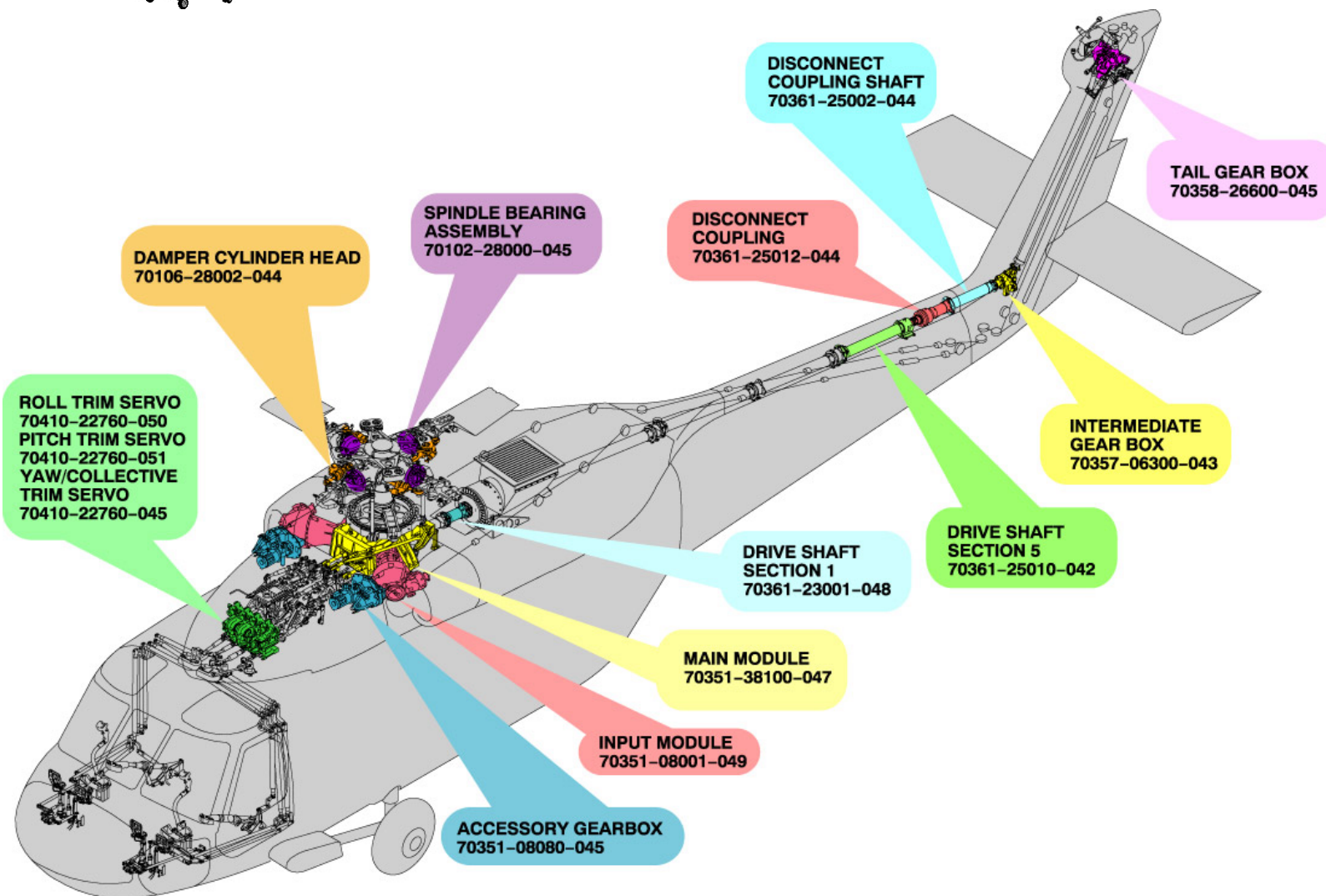
Sikorsky Turn-around Improvements



Part	2001 RTAT In days	2002 RTAT In days	% Improvem ent (decline)	Improvement Initiatives
Pitch Trim Servo	200	206	3%	• Procured new servo test stand • Developed in-house test capability • Output significantly up in 4Q02 • Recovery in 2003
Tail Rotor Drive Shaft #5	139	70	50%	• New shot peen offload vendor established
Tail Rotor Disconnect Coupling	66	81	(23)%	• Strike at supplier • Supplier has recovered • Recovery in 2003

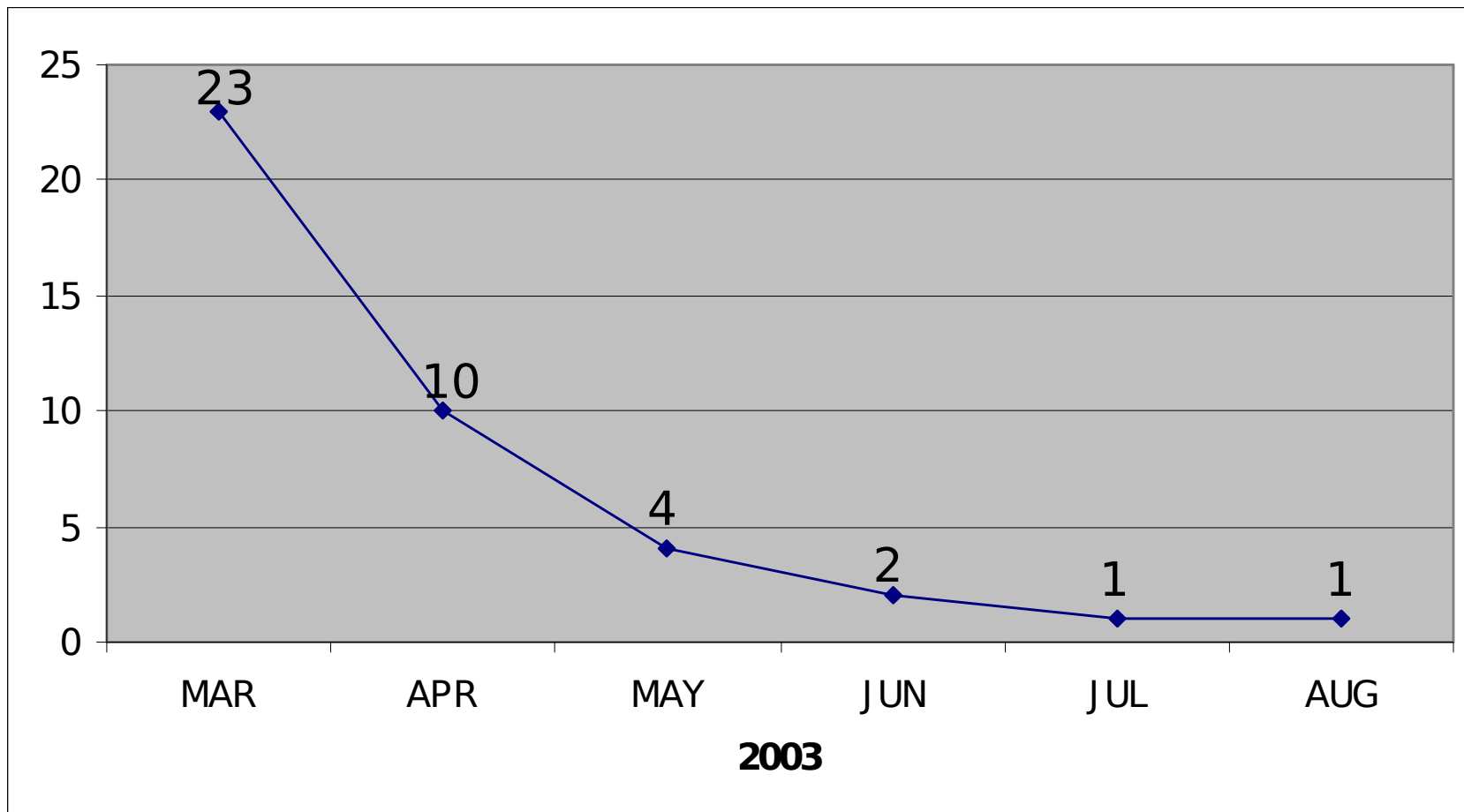


Dynamic Components





Avionics - Total Backorders





AN/AAS-42 (V)FLIR SYSTEM



TURRET UNIT (WRA-1)

NIIN: 01-460-8088
P/N: 3154216-1
WUC: 74DC1

ELECTRONICS UNIT (WRA-2)

NIIN: 01-460-7521
P/N: 3154212-1
WUC: 74DC2

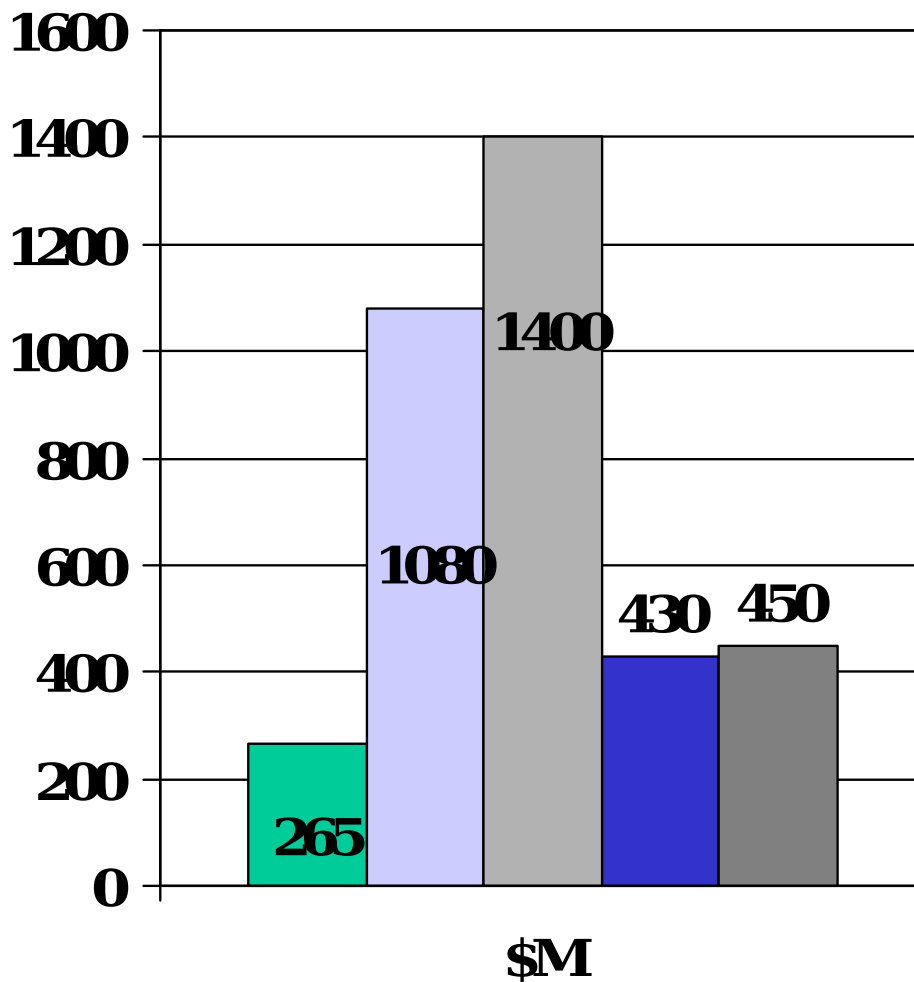
SO/ATO HAND CONTROLLER (WRA-3/4)

NIIN: 01-460-7922
P/N: 3154231-1
WUC: 74DC5





TIP TO TAIL



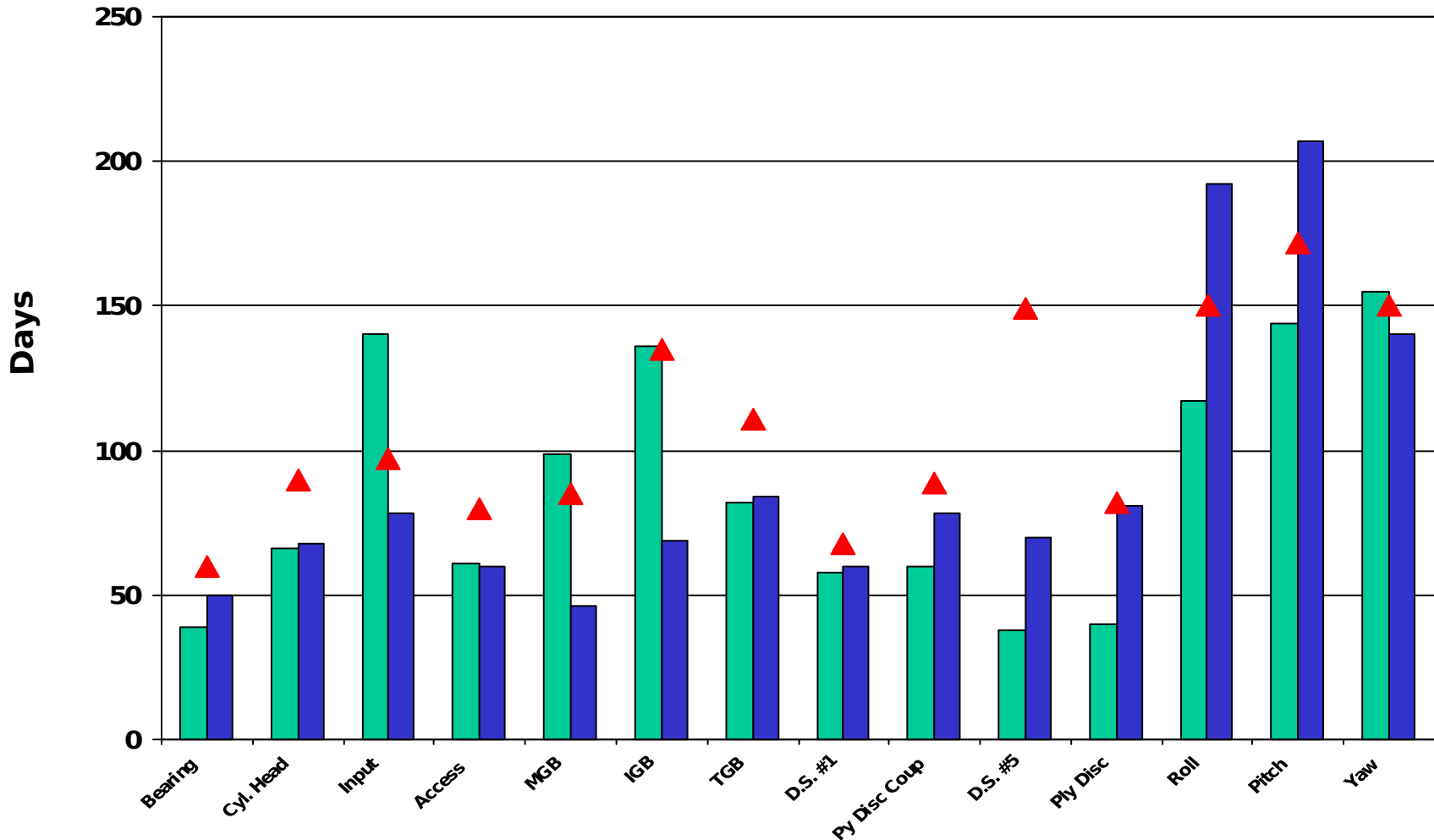
- **FOSSAC's Business Case Analysis**
- **MHSCo's Revised Proposal 3 OCT 02**
- **MHSCo's Original Proposal 30 Jul 02**
- **FOSSAC's Rev BCA (approx) Sep 03**
- **MHSCO's Proposal (approx) Sep 03**

BCA v. PROPOSAL(s)

PBL-14 O&R RIAI Performance

Performance Period 17Apr-11 Jul

03



BCA/CASH FLOW ANALYSIS



BCA

WITHOUT PBL: \$173,221,500
WITH PBL: \$ 141,936,400

SAVINGS: \$ 31,285,100

CASH FLOW ANALYSIS:

\$2M negative delta within budget horizon
agrees with NAVSUP's Financial Policy

Contractor has agreed to defer \$7.458M in
invoicing to first open budget year FY-06

Overall positive cash flow